## **RAW SEQUENCE LISTING**

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) no errors detected.

Application Serial Number: 58,008
Source: 1FGP
Date Processed by STIC: 6906

## ENTERED



**IFWP** 

RAW SEQUENCE LISTING DATE: 06/09/2006
PATENT APPLICATION: US/10/581,008 TIME: 10:33:34

Input Set : A:\65645(46590) sequence\_listing.txt

```
3 <110> APPLICANT: Takeda Pharmaceutical Company Limited
      5 <120> TITLE OF INVENTION: Method of Estimating Toxicity of Drug
      7 <130> FILE REFERENCE: 09707
C--> 9 <140 > CURRENT APPLICATION NUMBER: US/10/581,008
C--> 9 <141> CURRENT FILING DATE: 2006-05-26
      9 <150> PRIOR APPLICATION NUMBER: JP 2003-397551
     10 <151> PRIOR FILING DATE: 2003-11-27
     13 <160> NUMBER OF SEQ ID NOS: 60
     15 <170> SOFTWARE: PatentIn version 3.2
     17 <210> SEQ ID NO: 1
     18 <211> LENGTH: 4304
     19 <212> TYPE: DNA
     20 <213> ORGANISM: Homo sapiens
     23 <220> FEATURE:
     24 <221> NAME/KEY: CDS
     25 <222> LOCATION: (459)..(2033)
     27 <400> SEQUENCE: 1
     28 gcgagaactc atcctgtagt caccagatgg agtcccaaac agccaagcag atgtaaggcc
                                                                               60
     30 tgtgctgtgg ctctgaggcc ctgaatacag aagggtcact ttcttagtgg ccaaagagca
                                                                              120
                                                                              180
     32 gttgttgaca ttgatgtcta attattgaac acgaccagtc attttactga gctgcggtga
     34 ggaaacactg accatagaag atcaagccaa atgagggatt gcaaatttcc tgattctttt
                                                                              240
                                                                              300
     36 qaattaqqat tecaqatqqq qqeeteattt etacaqeeee caacatteet ataqeeqtta
     38 teactgecat caccactgec accageatet tettgeagat tecacceetg etececagag
                                                                              360
                                                                              420
     40 acttcctgct ttgaaagtga gcagaaagga agctctcaga aaaatctcta gtggtggctg
                                                                              476
     42 cogtogotoc agacaatogg aatootgoot toaccaco atg ggo tgg ott ttt ota
                                                  Met Gly Trp Leu Phe Leu
     43
     44
     46 aag gtt ttg ttg gcg gga gtg agt ttc tca gga ttt ctt tat cct ctt
                                                                              524
     47 Lys Val Leu Leu Ala Gly Val Ser Phe Ser Gly Phe Leu Tyr Pro Leu
     48
                    10
                                                             20
     50 gtg gat ttt tgc atc agt ggg aaa aca aga gga cag aag cca aac ttt
                                                                              572
     51 Val Asp Phe Cys Ile Ser Gly Lys Thr Arg Gly Gln Lys Pro Asn Phe
                                    30
     54 gtg att att ttg gcc gat gac atg ggg tgg ggt gac ctg gga gca aac
                                                                              620
     55 Val Ile Ile Leu Ala Asp Asp Met Gly Trp Gly Asp Leu Gly Ala Asn
     58 tgg gca gaa aca aag gac act gcc aac ctt gat aag atg gct tcg gag
                                                                              668
     59 Trp Ala Glu Thr Lys Asp Thr Ala Asn Leu Asp Lys Met Ala Ser Glu
                                                                     70
     60 55
                            60
     62 gga atg agg ttt gtg gat ttc cat gca gct gcc tcc acc tgc tca ccc
                                                                              716
     63 Gly Met Arg Phe Val Asp Phe His Ala Ala Ala Ser Thr Cys Ser Pro
     66 tee egg get tee ttg ete ace gge egg ett gge ett ege aat gga gte
                                                                              764
```

Input Set : A:\65645(46590) sequence\_listing.txt

67 68	Ser	Arg	Ala	Ser 90	Leu	Leu	Thr	Gly	Arg 95	Leu	Gly	Leu	Arg	Asn 100	Gly	Val	
70	aca	cac	aac	ttt	σca	atc	act	tct	ata	qqa	qqc	ctt	cca	ctc	aac	qaq	812
				Phe													
	1111	Arg		1110	AIU	vai			var	O <sub>T</sub>	O <sub>1</sub>	<b></b>	115	200		024	
72			105					110			•						0.50
				gca													860
75	Thr	Thr	Leu	Ala	Glu	Val	Leu	Gln	Gln	Ala	Gly	Tyr	Val	Thr	Gly	Ile	
76		120					125					130					
78	ata	aac	aaa	tgg	cat	ctt	gga	cac	cac	aac	tct	tat	cac	CCC	aac	ttc	908
				Trp													
		Gry	цуь	тър	птэ		GIY	1115	1113	Gry	145	- y -	1113	110	71511	150	
	135					140											056
				gat													956
83	Arg	Gly	Phe	Asp	Tyr	Tyr	Phe	Gly	Ile	Pro	Tyr	Ser	His	Asp	Met	Gly	
84					155					160					165		
86	t.at.	act	gat	act	cca	aac	tac	aac	cac	cct	cct	tat	cca	aca	tat	cca	1004
				Thr													
	Cys	1111	nop	170	110	OT y	- 1 -	11011	175			<b>-</b> 1.5		180	070		
88																	1050
				gga													1052
91	Gln	Gly	Asp	Gly	Pro	Ser	Arg	Asn	Leu	Gln	Arg	Asp	Cys	Tyr	Thr	Asp	
92			185					190					195				
94	ata	acc	ctc	cct	ctt	tat	qaa	aac	ctc	aac	att	qtq	gag	cag	ccg	gtg	1100
		_		Pro			-										
96		200				- 1 -	205					210					
				~~~	~++	~~~		~~~	<b>+</b> ~ +	~a+	~~~		~~~	200	aaa	++0	1148
				agc													1140
			Ser	Ser	Leu			ьуs	Tyr	Ата			Ата	Thr	GII		
	219					220					225					230	
																gct	1196
103	3 Ile	e Glr	n Arg	g Ala	. Ser	Thr	Ser	Gly	/ Arg	g Pro	) Phe	e Lei	ג Leı	туз	· Val	Ala	
104	4				235	5				240	)				245	5	
106	s cto	a acc	r cac	ato	cac	at.c	r ddd	tta	cct	: atc	act	. caa	a cta	a cca	a aca	gcg	1244
																Ala	
		LAIC	2 1112			, vai		ДСС	255					260			
10				250													1202
																agt	1292
11:	l Pro	o Arg	g Gl	/ Arg	j Ser	: Leu	ı Tyr	G13	/ Ala	f GT?	, Leu	ıTrı			: Asp	Ser	
112	2		265	5				270	)				275	5			
114	4 ct	qto	999	cag	ato	aag	gac	aaa	gtt	gad	cac	aca	a gto	g aag	g gaa	a aac	1340
																ı Asn	
110		280				1-	285					29		-			
				. +~											, ,,,	tat	1388
																tgt	1300
			е гег	ı Trp	) Pne		_	Asp	) Asr	ı GTZ			O Ala	a GII	т гу	Cys	
	295					300					305					310	
12:	2 gag	g cta	a gcg	g ggd	agt	gtg	, ggt	CCC	: ttc	act	: gga	a tti	t tgg	g caa	a act	cgt:	1436
12:	3 Gli	ı Let	ı Ala	a Gly	, Sei	val val	. Gly	Pro	Phe	Thi	Gly	/ Phe	e Trp	Gli	ı Thr	Arg	
124				-	315		_			320					325		
			7 00	a aat				cac	, acc			r da	a aa	a aaa	cac	cgg	1484
																Arg	2101
		r GT	A GT			, ATC	гпур	GII			F	911	ر دی م			, Arg	
128				330					335					34(			
																acc	1532
13:	l Val	l Pro	o Ala	a Leu	ı Ala	а Туг	Trp	Pro	Gly	/ Arg	y Val	Pro	o Val	l Ası	ı Val	Thr	

Input Set : A:\65645(46590) sequence listing.txt

120			245					350					355				
132		- a+	345	++~	++-	200	~+~	-	<b>~</b> 2.0	a++	+++	993		~+ ~	at a	aaa	1580
				ttg													1500
	ser		Ala	Leu	Leu	ser		Leu	Asp	116	Pne		1111	vai	vai	AIa	
136		360					365					370				~~~	1620
				gcc													1628
		Ala	GIn	Ala	ser		Pro	GIn	GIY	Arg	_	Pne	Asp	GIY	vai		
140				_		380					385					390	1686
				gtg													1676
	Val	Ser	Glu	Val		Phe	Gly	Arg	Ser		Pro	GIY	His	Arg		Leu	
144					395					400					405		
				aac	_		_	-		_			_				1724
147	Phe	His	Pro	Asn	Ser	Gly	Ala	Ala	_	Glu	Phe	Gly	Ala		Gln	Thr	
148				410					415					420			
				gag													1772
151	Val	Arg	Leu	Glu	Arg	Tyr	Lys	Ala	Phe	Tyr	Ile	Thr	Gly	Gly	Ala	Arg	
152			425					430					435				
154	gcg	tgt	gat	ggg	agc	acg	ggg	cct	gag	ctg	cag	cat	aag	ttt	cct	ctg	1820
155	Ala	Cys	Asp	Gly	Ser	Thr	Gly	Pro	Glu	Leu	Gln	His	Lys	Phe	Pro	Leu	
156		440					445					450					
158	att	ttc	aac	ctg	gaa	gac	gat	acc	gca	gaa	gct	gtg	CCC	cta	gaa	aga	1868
				Leu													
	455					460	_				465					470	
162	aat	qqt	qcq	gag	tac	caq	qct	qtq	ctq	CCC	qaq	qtc	aga	aag	gtt	ctt	1916
				Glu													
164	- 2	- 4			475					480			_	•	485		
	gca	gac	ata	ctc		gac	att	acc	aac		aac	atc	tcc	agc	cca	gat	1964
				Leu													
168		1.00		490					495					500		<b>-</b>	
	tac	act	caq	gac	cct	tca	σta	act		tac	tat	aat	ccc	tac	caa	att	2012
			_	Asp			-			-							
172	-1-		505					510		-2	-2		515	- 4			
	acc	tac		tgt	caa	acc	gca		caga	cca a	attti	ttati		acqao	gaag	ב	2063
	_	-	-	Cys		-	-									,	
176		520	5	0,75	<b></b>		525										
	agta		aga a	aatta	aggca	aa o		ette	c aaa	attt	catt	ttta	accci	tat t	taca	aaacac	2123
																ctgtat	2183
	_		_	_			_	_			_		_			agggag	2243
	_	_			_	_	_		_	-	_	_				agcttt	2303
																aaggca	2363
																tagttt	2423
																attagt	2483
																	2543
																tactca	2603
																gattct	2663
																cttgag	2723
																tccatg	
																ttaaa	2783
																ataaaa	2843
																aagtaa	2903
206	taaa	atgat	ttt a	attc	cagc	ca ca	agcc	aaaa	a aga	actt	tgcc	tgg	ctaaa	aag a	agtct	tctctc	2963

Input Set : A:\65645(46590) sequence\_listing.txt

```
3023
208 taaqtatqta atatacaaga aatacaattc aaagagatgt tcctataagt acatttttta
                                                                         3083
210 cacqqcatat atttaaaaaq qagqcccctt ttaatataaa attccggtta tataccaata
                                                                         3143
212 tggttaatta gcatttacac tatagtttga acgtatttta aatagcatga tgtgtataca
214 atgtctcccg cgcccattgg caaccagggt cgtgggaagc ttggtgagga gttaaccagg
                                                                         3203
216 teetqtqqtt taageagtgq ageaceeggg atteetgeee eeetttetge teacacaatt
                                                                         3263
218 gcactccatt cttccgcctt ccttgttttc tccaaaacca cctgataggg gggatgtcct
                                                                         3323
                                                                         3383
220 gatttctgag gtgtgcttct catcatgact gcttcgtttt gcccttctga tttccacggc
222 acaaqattat ctaccaaaat caaaacagaa tggccttact cttctcagga agaggctggt
                                                                         3443
224 aggcaggtgc attatcaaca ggtctgtgcc catgcagagt gagcagggag aggctgggca
                                                                         3503
226 ctgtggaatt tttctgtctg aactcgctca tggccacaga atggtcaccc agcttattta
                                                                         3623
228 ggtgtagaca agtatgacac agttctagaa aatactgact ataaaaatgt ctctgtgtgt
230 gtgtgtatgt atttatatgt atatgtatat atttttaaaa ggctcatctt acttgtaaac
                                                                         3683
                                                                         3743
232 atggactgct caatcactat taaaaagtca gtttaggctg ggcgcggtgg ctcacgcctg
                                                                         3803
234 tagtcccaga gctttgggag gctgaggtgg gtggatcact gggtcaggag tttgagacca
                                                                         3863
236 gcctggccaa catggtgaaa ccccatcgct actaaaaaat acaaaaatta gccgggcatg
238 gtggcgctca cctgtaatcc cggctactcg ggaggctgag gcaggagaga atcgcttgaa
                                                                         3923
240 ccqqqqaqqt qgaqgctgca gtgagccgag atcgcaccac tgcactccag cctgggtgat
                                                                         3983
242 qqaqcaaqac tccatctcaa aaaaaaaaaa gtcagtttag gctgggcgca gtggctcaca
                                                                         4043
244 cctgtagtcc cagcacttta ggaggctgag gggggtgatc acctgaggtc aggagtttga
                                                                         4103
246 gaccagectg gecaacatgg tgaaatectg tetetgetaa aaatacaaaa tttagetggg
                                                                         4163
248 catggtggcg tgcctgaaac cccagctact tgggaggctg aggcactaga atcgcttgag
                                                                         4223
250 cctqqqaqqt qqaqqttgca gtgagtggag atcgcgccaa cacattctag cctgagggac
                                                                         4283
                                                                         4304
252 agagtgagac tctatcatct c
255 <210> SEQ ID NO: 2
256 <211> LENGTH: 525
257 <212> TYPE: PRT
258 <213> ORGANISM: Homo sapiens
260 <400> SEQUENCE: 2
262 Met Gly Trp Leu Phe Leu Lys Val Leu Leu Ala Gly Val Ser Phe Ser
266 Gly Phe Leu Tyr Pro Leu Val Asp Phe Cys Ile Ser Gly Lys Thr Arg
                                    25
                20
270 Gly Gln Lys Pro Asn Phe Val Ile Ile Leu Ala Asp Asp Met Gly Trp
271
274 Gly Asp Leu Gly Ala Asn Trp Ala Glu Thr Lys Asp Thr Ala Asn Leu
                            55
278 Asp Lys Met Ala Ser Glu Gly Met Arg Phe Val Asp Phe His Ala Ala
                        70
282 Ala Ser Thr Cys Ser Pro Ser Arg Ala Ser Leu Leu Thr Gly Arg Leu
                                        90
286 Gly Leu Arg Asn Gly Val Thr Arg Asn Phe Ala Val Thr Ser Val Gly
                                    105
287
                100
290 Gly Leu Pro Leu Asn Glu Thr Thr Leu Ala Glu Val Leu Gln Gln Ala
                                120
294 Gly Tyr Val Thr Gly Ile Ile Gly Lys Trp His Leu Gly His His Gly
                                                140
                            135
        130
298 Ser Tyr His Pro Asn Phe Arg Gly Phe Asp Tyr Tyr Phe Gly Ile Pro
                        150
                                             155
299 145
302 Tyr Ser His Asp Met Gly Cys Thr Asp Thr Pro Gly Tyr Asn His Pro
```

Input Set : A:\65645(46590) sequence\_listing.txt
Output Set: N:\CRF4\06092006\J581008.raw

303					165					170					175	
	Pro	Cvs	Pro	Ala		Pro	Gln	Glv	asa		Pro	Ser	Arq	Asn		Gln
307		- 2		180	- 2			4	185	•				190		
	Arg	Asp	Cys	Tyr	Thr	Asp	Val	Ala	Leu	Pro	Leu	Tyr	Glu	Asn	Leu	Asn
311	_	-	195	-		_		200				_	205			
314	Ile	Val	Glu	Gln	Pro	Val	Asn	Leu	Ser	Ser	Leu	Ala	Gln	Lys	Tyr	Ala
315		210					215					220				
318	Glu	Lys	Ala	Thr	Gln	Phe	Ile	Gln	Arg	Ala	Ser	Thr	Ser	Gly	Arg	Pro
319	225					230					235					240
322	Phe	Leu	Leu	Tyr	Val	Ala	Leu	Ala	His	Met	His	Val	Pro	Leu	Pro	Val
323					245					250					255	_
326	Thr	Gln	Leu		Ala	Ala	Pro	Arg		Arg	Ser	Leu	Tyr		Ala	Gly
327			_	260					265			_		270		_
	Leu	Trp		Met	Asp	Ser	Leu		Gly	Gln	Ile	Lys		Lys	Val	Asp
331		_,	275	_		_	_,	280	_	_	-1	<b></b> 1	285			<b>~</b> 3
	His		Val	Lys	GIu	Asn		Pne	Leu	Trp	Pne		GIY	Asp	Asn	GIY
335		290	77-	~1	<b>*</b>	<b>~</b>	295	T	77-	<b>01</b>	C	300	~1··	Dwo	Dho	The
	Pro	Trp	Ala	GIN	гÃг	310	GIU	ьeu	Ата	GIA	315	vai	GIY	PIO	Pile	320
	305 Gly	Dho	Trn	Gl n	Thr		Gln	Clv	Clv	Sar		λla	Lare	Gln	Thr	
343	_	File	пр	GIII	325	Arg	GIII	GIY	GIY	330	FIO	AIG	цуз	GIII	335	1111
	Trp	Glu	Glv	Glv		Ara	Val	Pro	Ala		Δla	Tvr	Trp	Pro		Ara
347	_	014	O-y	340			• • • •	110	345			-1-		350	1	5
	Val	Pro	Val		Val	Thr	Ser	Thr		Leu	Leu	Ser	Val	Leu	Asp	Ile
351			355					360					365		_	
	Phe	Pro	Thr	Val	Val	Ala	Leu	Ala	Gln	Ala	Ser	Leu	Pro	Gln	Gly	Arg
355		370					375					380				
358	Arg	Phe	Asp	Gly	Val	Asp	Val	Ser	Glu	Val	Leu	Phe	Gly	Arg	Ser	Gln
	385					390					395					400
362	Pro	Gly	His	Arg	Val	Leu	Phe	His	Pro	Asn	Ser	Gly	Ala	Ala		Glu
363					405		_			410		_	_		415	_
	Phe	Gly	Ala		Gln	Thr	Val	Arg		Glu	Arg	Tyr	Lys		Phe	Tyr
367		ml	a1	420	77.	3	77-	<b>G</b>	425	<b>~</b> 1	0	mb	a1	430	<b>~1</b>	T 011
	Ile	Tnr	_	GIY	Ala	Arg	Ala		Asp	GIY	ser	Thr		Pro	GIU	ьeu
371	Gln	111.0	435	Dho	Dro	T ou	Tlo	440	7 an	T 011	Clu	Λαn	445	Thr	בות	Glu
375		450	цуѕ	PHE	PIO	ьeu	455	Pile	ASII	пеп	Gru	460	Asp	1111	AIa	Giu
	Ala		Pro	T.e.11	Glu	Δτα		Glv	Δla	Glu	Tvr		Δla	Val	Leu	Pro
	465	VUI	110	шец	Gra	470	Q <sub>1</sub> y	O. y	1124	OIU	475	0	1114	•••	204	480
	Glu	Val	Ara	Lvs	Val		Ala	Asp	Val	Leu		Asp	Ile	Ala	Asn	
383			3	-1-	485					490			_		495	-
	Asn	Ile	Ser	Ser		Asp	Tyr	Thr	Gln	Asp	Pro	Ser	Val	Thr	Pro	Cys
387				500		-	•		505	-				510		_
390	Cys	Asn	Pro	Tyr	Gln	Ile	Ala	Cys	Arg	Cys	Gln	Ala	Ala			
391	_		515	-				520	_	-			525			
394	<21	0 > SI	EQ II	ON C	: 3											
395	<21	1> Ll	ENGT	H: 22	258											
	<21															
397	<21	3 > OI	RGAN:	ISM:	Homo	o saj	piens	3								

Input Set : A:\65645(46590) sequence\_listing.txt

Output Set: N:\CRF4\06092006\J581008.raw

## Invalid <213> Response:

Use of "Artificial" only as "<213> Organism" response is incomplete, per 1.823(b) of New Sequence Rules. Valid response is Artificial Sequence.

Seq#:25,26,27,28,29,30,31,32,33,34,35,36,37,38,39,40,41,42,43,44,45,46,47,48 Seq#:49,50,51,52,53,54,55,56,57,58,59,60 VERIFICATION SUMMARYDATE: 06/09/2006PATENT APPLICATION: US/10/581,008TIME: 10:33:35

Input Set : A:\65645(46590) sequence\_listing.txt

Output Set: N:\CRF4\06092006\J581008.raw

L:9 M:270 C: Current Application Number differs, Replaced Current Application No

L:9 M:271 C: Current Filing Date differs, Replaced Current Filing Date